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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,512	11/02/2001	Mike Carlomagno	018190-307	1668

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EXAMINER

LAUCHMAN, LAYLA G

ART UNIT PAPER NUMBER

2877

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,512

Applicant(s)

CARLOMAGNO ET AL.

Examiner

L. G. Lauchman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 4 states that the tool head comprises a printing head, however, no support for that was found in the Detailed Description.

Claim Objections

Claim 22 is objected to because of the following informalities: Claim 22 should be dependent on Claim 16, not Claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-11, 13-15, 16-22, 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Hosotani et al (US 6,246,789).

As to Claims 1, 3-5, the patent teaches a component mounting apparatus, comprising: a frame (see FIG. 1), a tool head 15 connected to the frame, the tool head

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being adjustably movable in X and Y directions with respect to the frame (see col. 9, lines 32-62), a component platform 16 connected to the frame, the component platform being adjustably movable in X and Y directions with respect to the frame, and an optical system 19 (see Fig. 6) positionable to simultaneously view the tool head 15 and the component platform 16. The tool head is a component positioning head. The component platform is a PCB holder.

As to Claims 6-8, the patent teaches everything as applied to Claim 1 above, in addition a first positioning screw for moving the component platform in the X direction, and a second screw for moving the component platform in the Y direction (see col. 17, lines 55-67, and col. 18, lines 1-7).

As to Claims 9-11, the patent teaches everything as applied to Claim 1 above, in addition at least one positioning rod 231 (see Fig. 8) for moving the tool head in the X direction, and at least one positioning rod 231 for moving the tool head in the Y direction. The tool head is slidably movable along the positioning rod (see Col. 9, lines 39-44), the positioning art is slidably movable in the y direction and the tool head is slidably movable in the X direction.

As to Claims 13-15, the patent teaches everything as applied to Claim 1 above, in addition a camera 19 a, and a beam splitter, the beam splitter is being movable (col 10., lines 1-27), retractable such it can be moved away from a location between the tool head and the component platform.

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As to Claims 16, 17-21, 26 the patent teaches a method for alignment an electrical component, comprising (see Fig. 1 and 8): positioning the tool head 15 while the component platform 16 is at fixed position, positioning the component platform 26 while the tool head is at fixed position, simultaneously viewing the positions of tool head and the component platform with an optical system 19 positioned between the tool head and the component platform. Positioning the platform tool head and the component platform comprises moving the tool head and the component platform in the X and Y directions.

As to Claims 22, 24, 25, 27, 28 the patent teaches everything as applied to Claim 16, in addition positioning a movable beam splitter 19d between the tool head and the component platform, and viewing through the beam splitter with a camera 19a. The tool head is a component positioning head. The platform is a PCB holder.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosotani et al (US 6,246,789) as applied to claims 1 and 16 above, and further in view of Blais et al (US 5,044,072).

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As to Claims 2 and 23,

✓ The patent '789 teaches everything as applied to Claims 1 and 16, except that the tool head comprises a soldering/desoldering tool head. However, the patent '072 discloses a method and apparatus for alignment and placement of electrical component, where in the tool head (see Figs. 1 and 4, col.4, lines 23-29) comprises a soldering tool head. It would have been obvious to use a soldering tool head in the invention of Hosotani, since it would have integrated the electrical component into the printed circuit board.

As to Claim 12, the patent '789 teaches everything as applied to Claim 1, except for the for the first and the second pair of positioning rods and a pair of positioning arm. The function of the rods and the arm is to make the tool head slidably movable along the X and Y directions. The tool head 15 of the patent '798 is movable along the X and Y directions by different means. However, since the function of moving the tool head in X and Y direction is being performed, the structure lacks criticality. Therefore, it would have been an obvious matter of design choice to select a certain structure of rods, arms, or screws to move the tool head in the X and Y directions.

Conclusion

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. Papers should be faxed to TC 2877 via the PTO Fax Center located in CP4-4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Center number is (703)308-7722 or 308-7724.

If the Applicant wishes to send a Fax dealing with either a Proposed Amendment or for discussion for a phone interview then the fax should:

- a) Contain either the statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax Cover Sheet; and
- b) Should be unsigned by the attorney or agent.

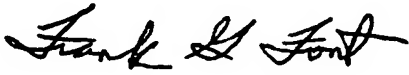
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This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. G. Lauchman whose telephone number is (703) 305-0071.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (703) 308-0956.

L. G. Lauchman
Patent Examiner
Art Unit 2877
8/19/03/lgl



Frank G. Font
Supervisory Patent Examiner
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